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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,049	09/25/2003	Jesse Peyton	0315-000542	6679
27572	7590	03/14/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			NAGY, MARC I	
			ART UNIT	PAPER NUMBER

3748

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,049

Applicant(s)

PEYTON, JESSE

Examiner

Marc I. Nagy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/23/03, 3/9/05, 8/19/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 12/23/2003, 3/9/2005, and 8/19/2005 are acknowledged. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings were received on 11/7/2003. These drawings are not acceptable.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference signs mentioned in the description:

- a. Bore 146
- b. Curved contour surface 172
- c. Roll pin 176.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:
- a. On page 10, paragraph 25: surface **as** shown.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Perevozchikov (U.S. Patent No. 6,299,423). In regards to claim 1, Perevozchikov discloses a scroll machine (scroll compressor 10) comprising: a shell (shell 12) defining a discharge chamber (discharge chamber 80); a first scroll member (non-orbiting scroll member 70) having a first spiral wrap (wrap 72) projecting outwardly from a first end cap (cap 14); a second scroll member (orbiting scroll member 56) having a second spiral wrap (wrap 58) projecting outwardly from a second end cap (base 16), said second spiral wrap being intermeshed with said first spiral wrap (see Fig. 1); a drive member (crankshaft 28) for causing said scroll members to orbit relative to one another whereby said spiral wraps will create pockets of progressively changing volume between a suction pressure zone and a discharge pressure zone, said discharge pressure zone being in communication with said discharge chamber; and a discharge valve (mechanical valve assembly 130) disposed between said discharge pressure zone and

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said discharge chamber, said discharge valve being disposed within a recess (recess 78) formed by said first scroll member, said discharge valve being movable between a first, a second, and a third position, wherein: said first position is a closed position where fluid flow between said discharge chamber and said discharge pressure zone is prohibited; said second position is an open position where fluid flow between said discharge chamber and said discharge pressure zone is permitted at a first flow level; and said third position is an open position where fluid flow between said discharge chamber and said discharge pressure zone is permitted at a second flow level greater than said first flow level (see column 4, line 57 to column 5, line 4—the second position is inherently disclosed as intermediate between fully closed and fully open positions).

7. In regards to claim 4, Perevozchikov discloses the scroll machine according to claim 1, as discussed above, wherein said first scroll member and said discharge valve is opened when discharge valve moves from said second position to said third position (see column 4, line 57 to column 5, line 4—the second position is inherently disclosed as intermediate between fully closed and fully open positions).

8. In regard to claims 5, 8, and 11, Perevozchikov discloses the scroll machine according to claim 1, as discussed above, wherein said discharge valve comprises a valve seat (valve seat 132), a valve plate (valve plate 134) and a valve stop (136).

9. In regards to claim 6, Perevozchikov discloses the scroll machine according to claim 5, as discussed above, wherein said valve plate moves with respect to said valve stop when said discharge valve moves from said first position to said third position (see

column 6, lines 38-67, Fig. 5—the biasing movement of the valve plate inherently causes it to move with respect to said valve stop).

10. In regards to claim 7, Perevozchikov discloses the scroll machine according to claim 5, as discussed above, wherein said valve plate moves with respect to said first scroll member when said discharge valve moves from said second position to said third position (see column 6, lines 38-67, Fig. 5—the biasing movement of the valve plate inherently causes it to move with respect to said first scroll member).

11. In regards to claim 9, Perevozchikov discloses the scroll machine according to claim 8, as discussed above, wherein said valve plate moves with respect to said valve seat when said discharge valve moves from said first position to said second position (see column 6, lines 38-67, Fig. 5—the biasing movement of the valve plate inherently causes it to move with respect to said valve seat).

12. In regards to claim 10, Perevozchikov discloses the scroll machine according to claim 10, as discussed above, wherein said valve plate moves with respect to said first scroll member when said discharge valve moves from said second position to said third position (see column 6, lines 38-67, Fig. 5—the biasing movement of the valve plate inherently causes it to move with respect to said first scroll member).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster (U.S. Patent No. 3,060,959). In regard to claim 2, Perevozchikov discloses the scroll machine according to claim 1, as discussed above, except for a discharge valve that moves axially with respect to said first scroll member. Foster teaches the use of a discharge valve (valve piston 7) that moves axially to cut off excess fluid flow. It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture a discharge valve that moves axially so as to have uniform sealing with the outlet.

16. In regard to claim 3, Perevozchikov discloses the scroll machine according to claim 1, as discussed above, except for a discharge valve that allows fluid to flow around its outer periphery. Foster teaches the use of a discharge valve (valve piston 7)

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that allows fluid to flow around its outer periphery (obturated chamber 14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture a discharge valve that allows fluid to flow around its outer periphery to have greater control of fluid flow as the valve opens and closes, further preventing noise or pressure reversal, causing reverse rotation, and yet being self-resetting (see column 3, line 45 to column 4, line 8).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Perevozchikov (U.S. Patent No. 6,139,291) discloses a scroll machine with discharge valve; Shim et al. (U.S. Patent No. 6,027,321) discloses a scroll-type compressor having an axially displaceable scroll plate; Hugenroth et al. (U.S. Patent No. 6,132,191) discloses a check valve for scroll compressor.

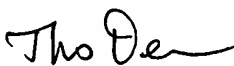
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc I. Nagy whose telephone number is 571-272-2758. The examiner can normally be reached on Monday - Friday 8 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc I. Nagy


THOMAS DENION
SUPERVISORY PATENT EXAMINER
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